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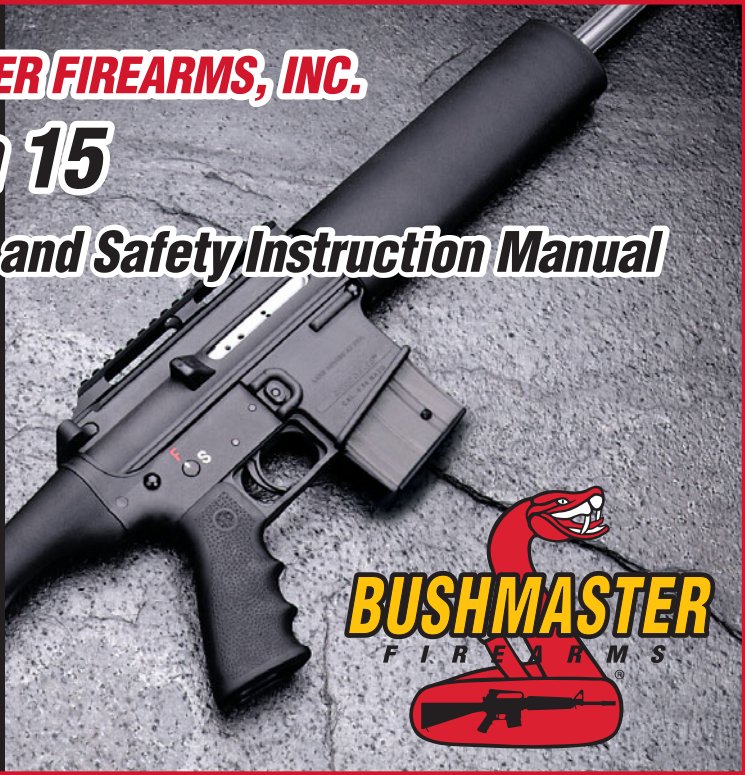
BUSHMASTER FIREARMS, INC.

Carbon 15

Operating and Safety Instruction Manual



For Models

97S & 97 Rifle

97 Pistol

21 Rifle

21 Pistol

Before disassembling, loading, or using this firearm, please Read, Understand, and Follow all the instructions in this manual, regarding proper handling and safe use!

Caution: If unfamiliar with firearms, seek further advice through Gun Safety Organizations, Local Gun Club, NRA Approved Instructor, or similar qualified organizations.

Warning: If this firearm is carelessly or improperly handled, unintentional discharge could result and could cause injury, death, or damage to property.

Warning: This Firearm could chamber a round if it is dropped or jarred with a loaded magazine in place - with the bolt carrier assembly locked to the rear, or in its forward position.

Caution: Use only clean, dry, high quality commercial manufactured ammunition. Use only ammunition that is appropriate for the 5.56mm/.223 Rem. caliber of your firearm.

Mission Statement

Our mission is to manufacture quality firearms, made with Pride in the USA, and using the best American made parts. We value our customers, and do our best to assure quality and friendly service. Bushmaster Firearms, Inc. is always striving to make great firearms even better.

Thank you for buying Bushmaster

The safety warnings in this booklet are very important. By understanding the dangers inherent in the use of any firearm, and by taking the precautions described herein, you can enjoy the use of your Carbon 15 Rifle or Pistol. Failure to do so may result in serious injury to you or others, as well as severe damage to the firearm and/or property.

Note: For any information or details not covered in this Operating manual, contacting our tech support at:

techsupport@bushmaster.com

800 883 6229

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Fundamental Rules and Procedures for Safe Firearms Handling

- Always treat every gun as if it were loaded!
- Always keep the firearm pointed in a safe direction!
- Always be sure the barrel is clear of any obstruction.
- Always be sure of what lies beyond your target and the safety of bystanders before you shoot.
- Always wear ear & eye protection when shooting.
- Always carry your gun so that you can control the direction of the muzzle if you fall or stumble.
- Never load the firearm until ready to shoot!
- Never leave a firearm unattended. Guns and ammunition should always be secured and stored separately, and beyond the reach of children and adults unfamiliar with firearms.
- Never allow your firearm to be used by anyone who has not read this instruction and safety manual.
- Never point any gun, loaded or unloaded, at anything you do not intend to shoot.
- Never touch the barrel after firing - it could be very hot!

- Keep your finger off the trigger and leave the safety on until ready to shoot!
- Make sure the Cam Pin is installed in the bolt group. If it isn't, your rifle can still fire and will explode!
- If your rifle stops firing with a live round still in the chamber (a misfire), quickly remove the round, keeping your face away from the ejection port. If you cannot remove it within 10 seconds, remove the magazine, and wait 15 minutes with the rifle pointed in a safe direction. At this point, the rifle could still fire the round.
- If your bolt fails to unlock, and you try to free it by tapping the butt stock on the ground, while pulling on the charging handle, point the muzzle away from yourself, and in a safe direction.
- If there is water in the barrel; Do not fire the rifle, it could explode!
- If a noticeable difference in sound or recoil is experienced; Stop firing! This condition could indicate an incomplete powder burn and/or a bullet stuck in the bore.

Facts About Your New Bushmaster Carbon 15 Firearm

The Bushmaster Carbon 15 rifle/pistol system consists of a firearm, magazine, and instruction manual. It is a very light weight firearm; gas operated, magazine fed, and operates in semi-automatic mode (i.e., a single shot fired each time the trigger is pulled).

- Caliber is .223 Remington / 5.56mm
- The upper and lower receivers are easily opened for cleaning and inspection.
- The bolt group and barrel extension are designed with lugs that lock the bolt group to the barrel extension.
- The carbon fiber upper and lower receivers reduce the weight of the rifle.
- Barrel rifling: R.H. twist; 1 in 9”; 6 lands & grooves.

Getting Ready to Shoot:

- With the safety on, insert the loaded magazine into the magazine well, always making sure the muzzle is pointed in a safe direction!
- Pull the charging handle fully to the rear.
- Release the charging handle. Do not ride or push the charging handle. Let it move forward on its own.
- Release bold catch
- Move lever from safety to fire.
- Note: If the rifle is not going to be fired immediately, make sure the selector lever is still on safe.

Immediate Action in Case of Trouble…

If your rifle stops firing
perform the following immediate actions…

1. Remove the magazine.
2. Pull charging handle all the way back.
3. Check chamber for any obstruction.
4. Insert the magazine and make sure it's seated properly.
5. Pull the charging handle all the way back. RELEASE charging handle to feed a new round. Don't ride the charging handle forward.
6. Now fire. If the rifle won't fire, look for trouble and apply remedial action. (See page 9)

Remedial Action…

If your rifle stops firing with a live round in the chamber of a hot barrel, remove the round fast. If this is not possible to remove within 10 seconds, remove the magazine and wait 15 minutes with rifle pointing in a safe direction (always make sure the safety stays on during that time). This will help prevent injury if a round fires as a result of a hot barrel. Keep your face away from the ejection port while clearing a hot chamber.

- If your Rifle still fails to fire after performing Steps 1 through 5 on previous page, check again for a jammed cartridge case.

- If a cartridge case is in the chamber, open the receivers, remove the bolt carrier, and try to tap out the case with a cleaning rod.

- If your rifle fails to fire, check the trouble shooting section in this manual - or take the rifle to a qualified gunsmith.

Bullet Stuck in the Bore…

WARNING:

If an audible "POP" or reduced recoil is experience during firing,

IMMEDIATELY CEASE FIRE:

Then:

- Remove the magazine
- Lock the bolt to the rear
- Place the selector lever on SAFE
- Check for a bullet in the bore

Do not apply the "Immediate Actions" previously described.

If a bullet is stuck in the barrel of the weapon, do not try to remove it. Take the rifle to a qualified gunsmith.

Disassembly Of Firearm…

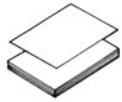
- Make sure firearm is not loaded and is pointed in a safe direction.
- Remove magazine and clear the chamber
- Open the bolt by pulling the charging handle completely to the rear while holding the charging handle in this position, use your other hand to lock the bolt in the rearward position by pushing the lower end of the bolt catch lever.
- The bolt carrier should lock in the rearward position. Let go of the charging handle. Do not ride it back!
- If there was a round in the chamber it should have been ejected...make sure there is not a round in the chamber by LOOKING INTO THE CHAMBER from THE EJECTION PORT AND VISUALLY CONFIRMING THAT THERE IS NOT A ROUND IN THE CHAMBER!
- Now that you are sure the gun is unloaded you may proceed in the disassembly.
- Send the Bolt "Home" by releasing the Bolt Catch.
- Remove the butt stock on the rifle by rotating the takedown lever 160° counter - clockwise. Grasp the rifle and stock in opposite hands and firmly pull stock directly rearward. Do not attempt to fire the rifle with stock removed. To do so is unsafe and could

cause bodily injury. Next remove the buffer spring and buffer assembly by unscrewing the recoil tube on both the rifle and pistol. Use caution the buffer spring will be under pressure.

- By using a small diameter drive tool, push both takedown pins from left to right until they stop.
- Separate the receivers by holding the grip with one hand and pulling the upper receiver up and forward. Note: The charging handle must be in the closed position; there will be some resistance due to the close tolerance fit between the upper and lower receivers.
- You may now pull back on the charging handle to remove the bolt carrier assembly.
- Detach the muzzle compensator by pulling the locking ring forward and remove from barrel with a twisting motion.

After firing, clean your rifle as soon as possible to make the job easier, and to avoid the development of any corrosion. When your firearm has not been fired, you should clean it at once or twice a year if you live in a temperate climate, or as often as once a week in a tropical climate. If you get your firearm wet, clean it as soon as possible. Use only high quality kits that include a cleaning rod, swab holder, cotton flannel bore patches, pipe cleaners, a small toothbrush, brass wire bristle bore and chamber brushes, and CLP (Cleaner–Lubricant–Preservative). After disassembling the rifle/pistol, thoroughly clean, inspect and lubricate all parts according to the techniques described in this manual.

Cleaning:



Clean the Bore…

- Always clean from chamber to muzzle in the natural direction of the bullet.
- Attach the three cleaning rod sections together, but leave each one about two turns short of being tight.
- Attach the bore brush, leaving it two turns short of being tight.
- Never run a brush down the barrel first or dip the brush in solvent.
- Swab out the bore with a patch moistened with "CLP".
- Point muzzle down. Hold the upper receiver in one hand while inserting the end of the rod without the brush into the chamber. Do not let either rub the bore,

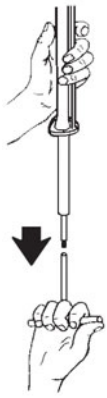


Diagram #1

this will scratch the bore. About the 2 - 3 inches of the rod should protrude out of the muzzle end.

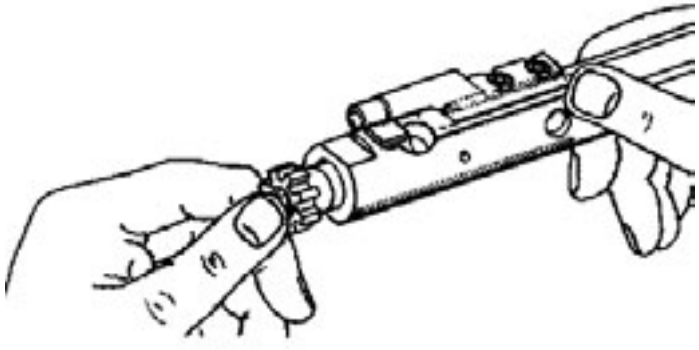
- Attach the handle section of the cleaning rod to the threaded end that is sticking out of the muzzle. Diagram #1
- Pull the brush through the bore and out the muzzle. You should be able to see the rod twisting as you pull it. This is the brush "tracking" in the rifling. Never reverse the brush in the chamber.
- After one pull, take the handle section off , and repeat the process.
- After three or four pulls, the three rod sections and the bore brush may become screwed tightly together. Loosen them up and repeat the process.
- Send a patch through the bore occasionally to help clean out the debris the brush has loosened. Just replace the bore brush with the rod tip (patch holder) and a wet patch. Pull it through. If you leave the rods loose again the patch will "track" in the rifling as before. But remember, always have the bore wet with cleaner before trying to pull a brush through.

Disassembly of Bolt Carrier Assembly…

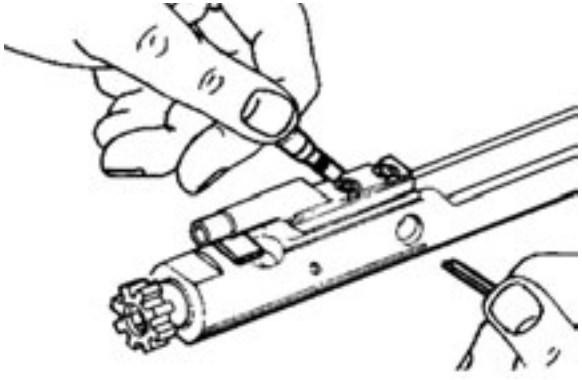
- Clean the bolt carrier assembly and components in a suitable cleaning solvent and remove any built-up carbon from the bolt.
- Clean the rifle using a commercially available gun cleaner (WD-40 works well for cleaning exterior surfaces of the receivers.) Clean bore with bore brush and wipe out with cleaning patch.
- Re-assembly is reverse of disassembly. Install the bolt into the carrier, install the cam pin (The cam pin will only go into the bolt one way, if the pin will not install rotate the bolt 180° and the pin should slide in freely)
- Install the firing pin then the firing pin retaining pin. Failure to install this correctly may cause the gun to fire with the bolt open and could cause serious injury.
- The cam pin and gas rings can be lubed lightly with a light weight oil.
- When reassembling bolt, stagger the three gas ring gaps 120° apart around the bolt. (This will reduce gas loss).

Disassembly of Bolt Carrier Assembly…

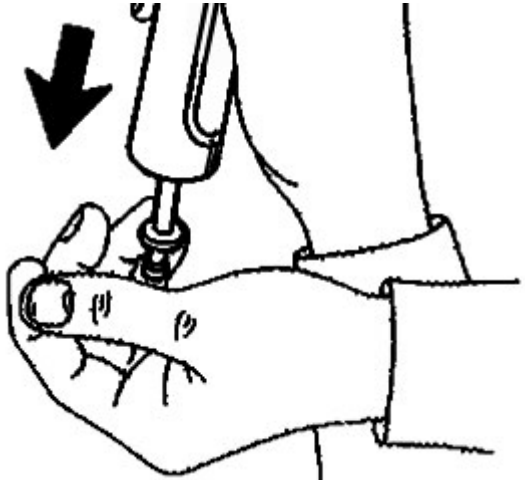
1. Push bolt into locked position



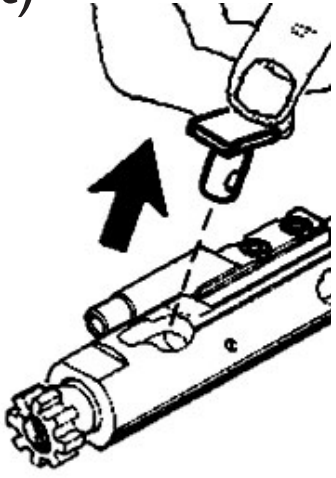
2. Remove firing pin retaining pin (Never Open or Close the Split End of Firing Pin Retaining Pin)



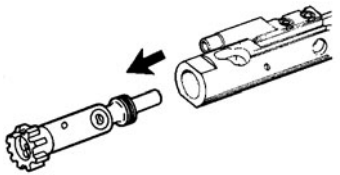
3. Drop firing pin out of rear of bolt carrier

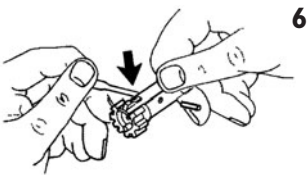


4. Remove bolt cam pin (Give cam pin a 1/4 turn and lift out)



5. Remove bolt assembly from carrier.



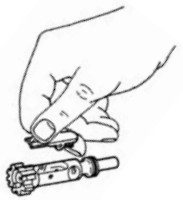


6. Push extractor pin out

Note: Press rear of extractor to check spring function. Remove extractor pin by pushing out with a punch, or the tip of a bullet.

7. Remove extractor and spring.

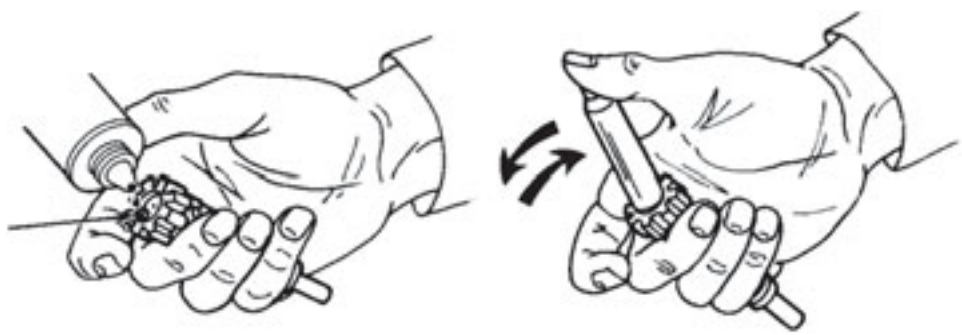
Caution: Extractor spring may pop out and get lost.



Bolt assembly should be disassembled only when dirty or damaged. Always replace damaged parts or see a qualified gunsmith. (Steps 6 & 7)

Cleaning the Ejector…

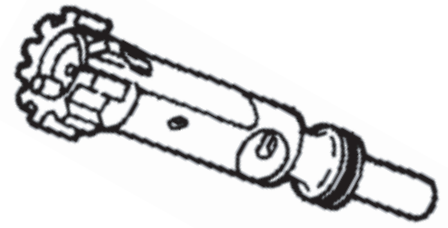
- The design of the ejector makes its disassembly for cleaning somewhat impractical (i.e., we don't recommend it!). Make sure your firearm ejects empty cases efficiently by following these steps on a monthly basis (more frequently if firing blanks).
- Remove the bolt from the carrier as described on previous pages. Hold it as shown with the ejector down and the extractor up.
- Dribble a few drops of CLP around the ejector to form a puddle.
- Take a fired or dummy case, and place it under the lip of the extractor. With a rocking motion, press the case down against the ejector. Since the ejector is spring loaded, some resistance will be felt. Press on the case until it stops against the bolt face. Ease off with your thumb slightly, and press down again. Repeat several times. Replace the CLP frequently. Once the spring action of the ejector is smooth and strong, dry off any excess.



Rock empty case against ejector to lubricate

Inspection before lubricating…

- Check the bolt: Look for cracks or fractures, especially in the cam pin hole area. Bolts with any pitting extending into the firing pin hole should be relaced.

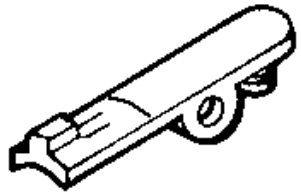


- Check the firing pin: If it is bent, cracked, too sharp, it should be replaced.

- Check the firing pin retaining pin: If ti is bent or badly worn, it should be replaced. NEVER use a "Cotter Pin" as a substitute for a real firing pin retaining pin. Cotter pins are not made of heat treat spring steel, and their round head shape will cause damage.

- Check the cam pin: If it is cracked, or chipped, it should be replaced.

- Check the extractor and extractor spring. If the extractor is chipped, or has broken edges in the area of the lip that engages the cartridge rim, it should be replaced. Check that the rubber insert is inside the extractor spring.



Lubrication…

Upper and Lower Receivers:

Lightly Lubricate

- The inside of the upper receiver, bore and chamber (using cleaning rod and patch).
- The firing pin with CLP.
- The charging handle and the inner and outer surfaces of the bolt carrier.

Generously Lubricate

- All moving parts inside the lower receiver (trigger, hammer, safety, bolt catch, etc), and all its various pins and detents. Don't forget the takedown, pivot pins, and their detents.
- The bolt, cam pin area, and bolt gas rings.
  The carrier key should be dried with a pipe cleaner - and add one drop of CLP. Wipe off fingerprints (they can start the corrosion process) from exterior surfaces with a soft oiled black rag.

Trouble Shooting…

Problem:	Check For:	What To Do:
Won't Fire	Selector lever on Safe	Put it on FIRE
	Improper assembly of firing pin retaining pin	Assemble correctly; goes in back of large shoulder on firing pin
	Too much oil in firing pin recess	Wipe out with pipe cleaner
	Defective ammunition	Remove and discard
	Too much carbon on firing pin or in firing pin recess	Clean
Bolt won't unlock	Dirty or burred bolt	Clean or see a qualified gunsmith
Won't Extract	Broken extractor spring	See a qualified gunsmith
	Dirty or corroded ammo	Remove stuck round - push out with cleaning rod

	Carbon in chamber	Clean chamber
	Fouling or carbon in extractor recess or lip	Clean extractor
Won't feed	Dirty or corroded ammo	Clean
	Dirty magazine	Clean
	Defective magazine	Replace
	Too many rounds in magazine	Take out excess
	Action of buffer assembly is restricted	Take out buffer and spring. Clean them
	Magazine not fully seated	Adjust magazine catch: turn catch clockwise to tighten and counter clockwise to loosen
Double Feed	Defective magazine	Replace
Won't Chamber	Dirty or corroded ammo	Clean
	Damaged ammo	Replace

	Carbon in chamber or on gas tube	Clean
Won't Lock	Dirt, corrosion, or carbon buildup in barrel locking lugs	Clean lugs
Won't Extract	Frozen extractor	Remove & clean
	Restricted buffer assembly	Remove & clean
	Restricted movement of bolt carrier group	Remove, clean, & lube. (before putting bolt back in, make sure gas tube fits into carrier key and that the carrier moves freely).
Short Recoil	Q-tip or pipe cleaner Pieces stuck inside carrier key	Clean out if possible or have rifle checked by a qualified gunsmith
	Alignment of gaps in bolt gas rings	Gaps in gas rings should be staggered 120° around the bolt body for maximum effectiveness
	Carbon or dirt in carrier key or on outside of gas tube	Clean carrier key or around area of the gas tube

Bolt Fails to Lock After Last Round	Dirty or corroded bolt latch	Clean - or replace bolt catch. Check for buffer end cap backout or obstruction. Check for full travel of bolt carrier
	Faulty magazine	Replace
Selector Lever Binds	Needs oil	Lubricate with CLP
	Dirt or sand under trigger	Clean
Bolt Carrier "Hung up"	Round jammed between bolt & charging handle or is double feeding	Remove magazine. Push in on the bottom of the bolt latch. While pulling down on the charging handle, tap the rifle butt on the ground. Bolt should lock to the rear.

Warning: **Keep clear of muzzle.**

Caution: **After round is removed, bolt is under tension.**

Note: **If this procedure fails, use a section of cleaning rod to push the bolt fully to the rear through the ejection port.**

Please Practice Safe Firearms Handling

This Operation Manual should always accompany this firearm.
When you lend, give, or sell this firearm,
be sure this manual goes with it.
To obtain a replacement manual, write to:
Bushmaster Firearms, Inc.
999 Roosevelt Trail • Windham, Maine • 04062
or by calling 800-883-6229 and include the serial number
or have it available when making a phone request.

Model: _____

Serial Number: _____

Purchased From: _____

Date Purchased: _____

Limited One Year Warranty

Bushmaster Firearms, Inc. products are warranted to be free from defects in material and workmanship. Warranty cards are included with all firearms and should be completely filled out and sent to Bushmaster Firearms, Inc. to activate the terms of the warranty. Any such defect of which Bushmaster Firearms, Inc. is given written notice, as provided below, within one year and ten days from the date of first purchase by a customer will be remedied by Bushmaster Firearms, Inc. This warranty is granted by Bushmaster Firearms. Inc., 999 Roosevelt Trail, Windham, Maine 04062.

To initiate a warranty claim call Bushmaster Firearms, Inc. at 1-800-883-6229, between 8:30 am and 6:00 pm E.S.T., Monday through Friday to get a "Return Merchandise Authorization" number. Warranty claims (transportation charges prepaid), should state the model and serial number of the gun concerned, a description of the difficulty experienced, and the date of purchase. It is recommended that shipment be insured by the owner, since Bushmaster Firearms, Inc. will accept no responsibility for loss or damage in transit. Transportation and insurance charges for return to owner will be paid by Bushmaster Firearms, Inc., if the related claim is a proper claim for warranty work. The firearm should then be sent to the Warranty Service Department, Bushmaster Firearms, Inc., Lake Havasu Division, 1070 Metric Drive, Lake Havasu City, AZ. 86403.

Please Practice Safe Firearms Handling!

This Manual Should Always Accompany
Your Bushmaster Carbon 15 Firearm!

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